

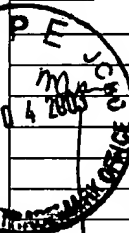
Form 149A Modified		Application Number		09/715,532		RECEIVED	
		Filing Date		Nov. 16, 2000			
		First Named Inventor		Brad A. Armstrong		DEC 11 2003	
		Art Unit		2675			
		Examiner Name		M. Moyer		Technology Center 2600	
		Applicant's File Number		F30			
Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted	
mm	2430284	11/4/1947	EVERS	Cited for Related Interest	341/187	Yes	
	3296882	1/10/1967	DURAND	Cited for Related Interest	74/471		
	3611068	10/5/1971	FUJITA	Footnote 23 -- Special Interest	338/2	Yes	
	3693425	9/26/1972	STARITA ETAL	Cited for Related Interest	73/862.044	Yes	
	3710050	1/9/1973	RICHARDS	Cited for Related Interest	200/61.43		
	3771037	11/6/1973	BAILEY	Cited for Related Interest	318/580	Yes	
	3806471	4/23/1974	MITCHELL	Footnote 80 -- Special Interest	252/519	Yes	
	3921445	11/25/1975	HILL ETAL	Cited for Related Interest	73/862	Yes	
	3952173	4/20/1976	TSUJI ETAL	Cited for Related Interest	200/511	Yes	
	3988556	10/26/1976	HYODO	Cited for Related Interest	200/511	Yes	
	3993884	11/23/1976	KONDUR ETAL	Footnote 75 -- Special Interest	200/295		
	4099409	7/11/1978	EDMOND	Cited for Related Interest	73/862	Yes	
	4133012	1/2/1979	TAKAMIYA ETAL	Footnote 77 -- Special Interest	360/90		
	4158759	6/19/1979	MASON	Footnote 41 -- Special Interest	219/720		
	4164634	8/14/1979	GILANO	Cited for Related Interest	200/5A		
	4216467	8/5/1980	COLSTON	Cited for Related Interest	341/20	Yes	
	4224602	9/23/1980	ANDERSON ETAL	Cited for Related Interest	340/321	Yes	
	4246452	1/20/1981	CHANDLER	Footnote 62 -- Special Interest	200/5A	Yes	
	4268815	5/19/1981	EVENTOFF	Cited for Related Interest	338/69	Yes	
	4276538	6/30/1981	EVENTOFF	Cited for Related Interest	338/69	Yes	
	4297542	10/27/1981	SHUMWAY	Cited for Related Interest	200/6A	Yes	
	4301337	11/17/1981	EVENTOFF	Cited for Related Interest	200/5A	Yes	
	4313113	1/26/1982	THORNBURG	Footnote 28 -- Special Interest	345/159	Yes	
	4314228	2/2/1982	EVENTOFF	Cited for Related Interest	338/114	Yes	
	4314227	2/2/1982	EVENTOFF	Cited for Related Interest	338		
	4315238	2/9/1982	EVENTOFF	Cited for Related Interest	338	Yes	
	4348142	9/7/1982	FIGOUR	Cited for Related Interest	414/2	Yes	
	4349708	9/14/1982	ASHER	Cited for Related Interest	200/6A		
	4369663	1/25/1983	VENTURELLO ETAL	Cited for Related Interest	73/862.043	Yes	
	4369971	1/25/1983	CHANG ETAL	Cited for Related Interest	463/2		
	4385841	5/31/1983	KRAMER	Cited for Related Interest	368/29		
	4406217	9/27/1983	OOTA	Footnote 42 -- Special Interest	99/280		
	4408103	10/4/1983	SMITH	Cited for Related Interest	200/6A		
	4414537	11/8/1983	GRIMES	Cited for Related Interest	341/20	Yes	
	4419653	12/6/1983	WAIGAND	Cited for Related Interest	338/114		
	4420808	12/13/1983	DIAMOND ETAL	Cited for Related Interest	701/4		
	4469330	9/4/1984	ASHER	Cited for Related Interest	463/38	Yes	
	4469930	9/4/1984	TAKAHASHI	Cited for Related Interest	219/121.72		
	4489302	12/18/1984	EVENTOFF	Cited for Related Interest	338/99		
	4490587	12/25/1984	MILLER	Cited for Related Interest	200/5		
	4491325	1/1/1985	Bersheim	Footnote 91 -- Special Interest	463/38		
	4504059	3/12/1985	Weinrieb	Cited for Related Interest	273/148		
	4514600	4/30/1985	LENTZ	Cited for Related Interest	200/5R		
mm	4536746	8/20/1985	GOBELI	Cited for Related Interest	341/20	Yes	

Examiner
Signature

Michael J. Moyer

Date
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Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
	4536746	8/20/1985	GOBELI	Footnote 26 -- Special Interest	341/20	
	4546347	10/8/1985	KIRSCH	Cited for Related Interest	345/166	
	4552360	11/12/1985	BROMLEY ETAL	Cited for Related Interest	463/38	Yes
	4555960	12/3/1985	KING	Footnote 1 -- Special Interest	74/471XY	Yes
	4573682	3/4/1986	Mayon	Cited for Related Interest	273/148	
	4604509	8/5/1986	CLANCY ETAL	Cited for Related Interest	200/513	
	4604502	8/5/1986	Thomas	Footnote 92 -- Special Interest	200/6A	
	4615252	10/7/1986	YAMAUCHI ETAL	Cited for Related Interest	84/687	Yes
	4630823	12/23/1986	Grant	Cited for Related Interest	273/148	
	4647916	3/3/1987	BOUGHTON	Cited for Related Interest	345/156	
	4667271	5/19/1987	WILSON	Cited for Related Interest	361/725	
	4670743	6/2/1987	ZEMKE	Cited for Related Interest	345/157	Yes
	4673919	6/16/1987	KATAOKA	Cited for Related Interest	341/11	Yes
	4680577	7/14/1987	STRAAYER ETAL	Footnote 67 -- Special Interest	345/160	
	4684089	8/4/1987	LELY	Cited for Related Interest	248/124.1	Yes
	4687200	8/18/1987	SHIRAI	Cited for Related Interest	463/37	
	4694231	9/15/1987	ALVITE	Cited for Related Interest	318/568.11	Yes
	4724292	2/9/1988	ICHIKAWA	Cited for Related Interest	219/708	
	4733214	3/22/1988	ANDRESEN	Cited for Related Interest	219/708	Yes
	4745301	5/17/1988	MICHALCHIK	Cited for Related Interest	307/119	
	4766271	8/23/1988	MITSUHASHI ETAL	Cited for Related Interest	200/512	
	4786895	11/22/1988	CASTANEDA	Cited for Related Interest	345/160	Yes
	4811608	3/14/1989	HILTON	Cited for Related Interest	73/862.043	Yes
	4855704	8/8/1989	BETZ	Cited for Related Interest	336/132	Yes
	4858930	8/22/1989	SATO	Footnote 54 -- Special Interest	463/23	
	4866542	9/12/1989	SHIMADA ETAL	Cited for Related Interest	386/69	Yes
	4866544	9/12/1989	HASHIMOTO	Cited for Related Interest	360/40	
	4879556	11/7/1989	DUI MEL	Footnote 16 -- Special Interest	341/20	
	4910503	3/20/1990	BRODSKY	Cited for Related Interest	345/161	Yes
	4909514	3/20/1990	Tano	Footnote 94 -- Special Interest	273/148	
	4924216	5/8/1990	LEUNG	Footnote 11 -- Special Interest	463/38	Yes
	4933670	6/12/1990	WISLOCKI	Footnote 10 -- Special Interest	345/167	Yes
	4935728	6/19/1990	KLEY	Footnote 5 -- Special Interest	345/161	Yes
	4962448	10/9/1990	DEMAIO ETAL	Cited for Related Interest	700/17	Yes
	4975676	12/4/1990	GREENHALGH	Cited for Related Interest	338/114	Yes
	5038144	8/6/1991	Kaye	Cited for Related Interest	341/176	
	5059958	10/22/1991	JACOBS ETAL	Cited for Related Interest	345/158	
	5065146	11/12/1991	GARRETT	Footnote 13 -- Special Interest	345/161	Yes
	5068498	11/26/1991	ENGEL	Cited for Related Interest	200/6A	
	5103404	4/7/1992	MCINTOSH	Cited for Related Interest	318/568	Yes
	5116051	5/26/1992	MONCRIEF ETAL	Cited for Related Interest	463/36	
	5128671	7/7/1992	THOMAS	Cited for Related Interest	341/20	Yes
	5132658	7/21/1992	DAUENHAUER ETAL	Cited for Related Interest	338/92	Yes
	5139439	8/18/1992	SHIE	Cited for Related Interest	439/359	
	5142931	9/1/1992	MENAHM	Footnote 7 -- Special Interest	74/471XY	Yes
	5164697	11/17/1992	KRAMER	Footnote 58 -- Special Interest	338/69	Yes
	5168221	12/1/1992	HOUSTON	Cited for Related Interest	324/207	Yes
	5182796	1/26/1993	SHIBAYAMA ETAL	Cited for Related Interest	345/841	
	5183998	2/2/1993	HOFFMAN ETAL	Cited for Related Interest	219/492	
	5184830	2/9/1993	OKADA ETAL	Footnote 51 -- Special Interest	463/29	
	5189355	2/23/1993	LARKINS ETAL	Cited for Related Interest	318/685	Yes
m/jn	5196782	3/23/1993	D'ALEO ETAL	Cited for Related Interest	323/320	Yes

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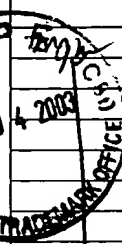
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
OIPF DEC 14 2003 MAY 19 2004	5200597	4/6/1993	EASTMAN	Cited for Related Interest	235/455	Yes
	5203563	4/20/1993	LOPER	Footnote 64 -- Special Interest	273/148B	Yes
	5207426	5/4/1993	INOUE ET AL	Footnote 20 -- Special Interest	463/36	Yes
	5222400	6/29/1993	HILTON	Footnote 88 -- Special Interest	73/862	
	5231386	7/27/1993	BRANDENBURG ETAL	Footnote 18 -- Special Interest	345/174	
	5237311	8/17/1993	MAILEY ETAL	Cited for Related Interest	345/167	Yes
	5250930	10/5/1993	YOSHIDA ETAL	Footnote 15 -- Special Interest	345/168	
	5252952	10/12/1993	FRANK ETAL	Footnote 3 -- Special Interest	345/157	Yes
	5259626	11/9/1993	HO	Cited for Related Interest	463/37	
	5264768	11/23/1993	GREGORY ETAL	Footnote 32 -- Special Interest	318/561	
	5271290	12/21/1993	FISCHER	Cited for Related Interest	74/471XY	Yes
	D342740	12/28/1993	PARKER	Cited for Related Interest	D14/218	Yes
	5278557	1/11/1994	STOKES ETAL	Cited for Related Interest	341/34	
	5280926	1/25/1994	SOGGE ETAL	Cited for Related Interest	277/641	
	5287089	2/15/1994	PARSONS	Cited for Related Interest	345/156	Yes
	5286024	2/15/1994	WINBLAD	Cited for Related Interest	273/148B	
	5293158	3/8/1994	SOMA	Cited for Related Interest	345/161	Yes
	5294121	3/15/1994	CHIANG	Footnote 52 -- Special Interest	273/148B	
	5298919	3/29/1994	CHANG	Cited for Related Interest	345/163	Yes
	5311779	5/17/1994	TERUO	Cited for Related Interest	73/726	Yes
	5313229	5/17/1994	GILLIGAN ETAL	Cited for Related Interest	345/157	
	5315204	5/24/1994	PARK	Footnote 50 -- Special Interest	310/339	Yes
	5327201	7/5/1994	COLEMAN ETAL	Footnote 70 -- Special Interest	399/342	
	5329276	7/12/1994	HIRABAYASHI	Cited for Related Interest	340/870.31	Yes
	5333057	7/26/1994	MORIKAWA ETAL	Cited for Related Interest	358/296	
	5345807	9/13/1994	BUTTS ETAL	Footnote 73 -- Special Interest	73/1.15	
	5349371	9/20/1994	FONG	Cited for Related Interest	345/166	
	5355352	10/11/1994	KOBAYASHI ETAL	Footnote 37 -- Special Interest	368/281	
	5364108	11/15/1994	ESNOUF	Cited for Related Interest	368/281	Yes
	5365494	11/15/1994	LYNCH	Footnote 39 -- Special Interest	368/10	Yes
	5376913	12/27/1994	PINE ETAL	Cited for Related Interest	338/114	Yes
	5386084	1/31/1995	RISKO	Cited for Related Interest	174/52.3	
	5389757	2/14/1995	SOULIERE	Footnote 57 -- Special Interest	200/345	
	5391083	2/21/1995	ROEBUCK ETAL	Cited for Related Interest	174/52.3	
	D355901	2/28/1995	BRADLEY	Cited for Related Interest	D14/410	Yes
	5394168	2/28/1995	SMITH, III, ETAL	Cited for Related Interest	345/156	
	5396235	3/7/1995	MAESHIMA	Footnote 92 -- Special Interest	341/34	Yes
	5396225	3/7/1995	OKADA ETAL	Footnote 55 -- Special Interest	463/40	
	5399823	3/21/1995	MCCUSKER	Footnote 74 -- Special Interest	200/521	
	5419613	5/30/1995	Wedeking	Cited for Related Interest	297/217	
	5440237	8/8/1995	BROWN ETAL	Footnote 83 -- Special Interest	324/601	Yes
	5452615	9/26/1995	HILTON	Cited for Related Interest	73/862	
	5457478	10/10/1995	FRANK	Cited for Related Interest	345/158	Yes
	5459487	10/17/1995	BOUTON	Cited for Related Interest	463/37	
	5467108	11/14/1995	MIMLITCH	Cited for Related Interest	345/161	
	5487053	1/23/1996	BEISWENGER ETAL	Cited for Related Interest	368/69	
	5499041	3/12/1996	BRANDENBURG ETAL	Footnote 33 -- Special Interest	345/174	
	5508719	4/16/1996	GERVAIS	Cited for Related Interest	345/157	
	5510812	4/23/1996	O'MARA ETAL	Footnote 38 -- Special Interest	345/161	Yes
	5512892	4/30/1996	Corballis	Footnote 93 -- Special Interest	341/22	
	5517211	5/14/1996	KWANG-CHIEN	Cited for Related Interest	345/158	
mpw	5528265	6/18/1996	Harrison	Cited for Related Interest	345/158	

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Examiner Signature	<i>Michael J. May</i>	Date Considered	28 Jan 2004	Technology Center 2600
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Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
	5530455	6/25/1996	GILICK ETAL	Cited for Related Interest	345/163	
	5541622	7/30/1996	ENGLE ETAL	Footnote 34 -- Special Interest	345/161	
	5543781	8/6/1996	GANUCHEAU, JR. ETAL	Footnote 68 -- Special Interest	340/7.52	
	5550339	8/27/1996	HAUGH	Cited for Related Interest	200/5A	Yes
	5552799	9/3/1996	HASHIGUCHI	Footnote 53 -- Special Interest	345/3.2	
	5551693	9/3/1996	GOTO ETAL	Cited for Related Interest	463/37	
	5555004	9/10/1996	ONO ETAL	Cited for Related Interest	345/161	
	5559432	9/24/1996	LOGUE	Cited for Related Interest	324/207.17	
	5565891	10/15/1996	ARMSTRONG	Footnote 90 -- Special Interest	345/167	Yes
	5564560	10/15/1996	MINELLI ETAL	Footnote 60 -- Special Interest	200/516	
	5589828	12/31/1996	ARMSTRONG	Footnote 89 -- Special Interest	341/20	Yes
	5591924	1/7/1997	HILTON	Cited for Related Interest	73/862	
	5602569	2/11/1997	KATO	Cited for Related Interest	345/158	
	5606594	2/25/1997	REGISTER ETAL	Cited for Related Interest	455/556.2	
	5607158	3/4/1997	Chan	Cited for Related Interest	273/148B	
	5615083	3/25/1997	Burnett	Cited for Related Interest	361/686	
	5640566	6/17/1997	VICTOR ETAL	Cited for Related Interest	717/113	Yes
	5644113	7/1/1997	DATE ETAL	Cited for Related Interest	200/5R	
	D381982	8/5/1997	ZEITMAN	Cited for Related Interest	D14/162	
	5657051	8/12/1997	LIAO	Cited for Related Interest	345/163	
	5659334	8/19/1997	YANIGER ETAL	Cited for Related Interest	345/156	
	4045650	8/30/1997	NESTOR	Cited for Related Interest	200/556	
	5670955	9/23/1997	THORN ETAL	Footnote 24 -- Special Interest	341/34	Yes
	5670988	9/23/1997	TICKLE	Cited for Related Interest	345/157	
	5669818	9/23/1997	THORNER ETAL	Cited for Related Interest	463/30	
	5673237	9/30/1997	BLANK	Cited for Related Interest	368/10	Yes
	5675329	10/7/1997	BARKER ETAL	Cited for Related Interest	341/22	Yes
	5675309	10/7/1997	DEVOLPI	Cited for Related Interest	338/68	
	5675359	10/7/1997	ANDERSON	Cited for Related Interest	345/161	
	5684759	11/4/1997	HUANG ETAL	Cited for Related Interest	368/10	
	5687080	11/11/1997	HOYT ETAL	Footnote 14 -- Special Interest	700/85	
	5689285	11/18/1997	ASHER	Footnote 30 -- Special Interest	345/161	Yes
	5706027	1/6/1998	HILTON ETAL	Cited for Related Interest	345/156	
	5704612	1/6/1998	KELLY ETAL	Cited for Related Interest	273/402	
	5716274	2/10/1998	GOTO ETAL	Cited for Related Interest	463/37	
	5738352	4/14/1998	OHKUBO ETAL	Cited for Related Interest	273/148B	
	5749577	5/12/1998	COUCH ETAL	Cited for Related Interest	273/148B	Yes
	5764219	6/9/1998	RUTLEDGE ET AL	Footnote 21 -- Special Interest	345/159	Yes
	5767840	6/16/1998	SELKER	Cited for Related Interest	345/161	
	5767839	6/16/1998	ROSENBERG	Cited for Related Interest	345/161	Yes
	5767840	6/16/1998	SELKER	Cited for Related Interest	345/161	
	5774109	6/30/1998	WINKSY ETAL	Cited for Related Interest	345/685	
	5778404	7/7/1998	CAPPS ETAL	Cited for Related Interest	715/531	Yes
	5781807	7/14/1998	GLASSGOLD ETAL	Footnote 79 -- Special Interest	396/71	
	5790102	8/4/1998	NASSIMA	Footnote 96 -- Special Interest	345/163	Yes
	5805138	9/8/1998	BRAWNE ETAL	Cited for Related Interest	345/156	
	5812114	9/22/1998	LOOP	Footnote 35 -- Special Interest	345/157	
	5815139	9/29/1998	YOSHIKAWA	Cited for Related Interest	345/157	
	5828363	10/27/1998	YANIGER ETAL	Cited for Related Interest	345/156	
	5831596	11/3/1998	MARSHALL ETAL	Cited for Related Interest	345/161	
	5835977	11/10/1998	KAMENTSER ETAK	Cited for Related Interest	73/862.05	
mgm	4786764	11/22/1998	Padula et al	Footnote ?? -- Special Interest	178/18	

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Examiner Signature	<i>Michael J. Maye</i>	Date Considered	289/04
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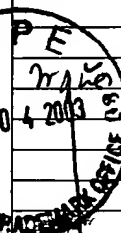
Technology Center 2600

Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
OIP DEC 04 2003 PATENT & TRADEMARK OFFICE	5847305	12/8/1998	YOSHIKAWA ETAL	Footnote 45 -- Special Interest	84/634	Yes
	5847639	12/8/1998	YANIGER	Cited for Related Interest	338/99	Yes
	5847694	12/8/1998	REDFORD ETAL	Footnote 31 -- Special Interest	345/158	
	5847698	12/8/1998	REAVY ETAL	Cited for Related Interest	345/173	
	5854624	12/29/1998	GRANT	Cited for Related Interest	345/169	Yes
	5853326	12/29/1998	GOTO ETAL	Cited for Related Interest	463/37	
	5854622	12/29/1998	BRANNON	Cited for Related Interest	345/161	
	5867808	2/2/1999	SELKER ETAL	Cited for Related Interest	702/41	Yes
	5872521	2/16/1999	LOPATUKIN ETAL	Cited for Related Interest	340/7.52	
	5883619	3/16/1999	HO ETAL	Cited for Related Interest	345/163	Yes
	5889236	3/30/1999	GILLESPIE ET AL	Cited for Related Interest	178/18.01	Yes
	5889507	3/30/1999	ENGLE ETAL	Footnote 17 -- Special Interest	345/161	
	5889236	3/30/1999	GILLESPIE ETAL	Cited for Related Interest	187/18.01	
	5895471	4/20/1999	KING ETAL	Cited for Related Interest	707/104.1	Yes
	5898359	4/27/1999	ELLIS	Cited for Related Interest	338/47	Yes
	5898425	4/27/1999	SEKINE	Footnote 19 -- Special Interest	345/168	
	5909207	6/1/1999	HO	Cited for Related Interest	345/156	
	5910798	6/8/1999	KIM	Footnote 27 -- Special Interest	345/163	Yes
	5910882	6/8/1999	BURRELL	Footnote 76 -- Special Interest	361/681	
	5917779	6/29/1999	RALSON ETAL	Cited for Related Interest	368/83	
	5923317	7/13/1999	SAYLER ETAL	Footnote 36 -- Special Interest	345/156	
	5923267	7/13/1999	BEUK ETAL	Cited for Related Interest	340/825	
	5943044	8/24/1999	MARTINELLI ETAL	Footnote 25 -- Special Interest	345/174	Yes
	5948066	9/7/1999	WHALEN ETAL	Footnote 44 -- Special Interest	709/229	Yes
	5952631	9/14/1999	MIYAKI	Cited for Related Interest	200/6A	
	5963196	10/5/1999	NISHIUMI ETAL	Cited for Related Interest	345/161	
	5966117	10/12/1999	SEFFERNICK ETAL	Cited for Related Interest	345/161	
	5974238	10/26/1999	CHASE	Cited for Related Interest	709/248	Yes
	5973668	10/26/1999	WATANABE	Cited for Related Interest	345/157	
	5983004	11/9/1999	SHAW ETAL	Footnote 78 -- Special Interest	709/227	
	5984785	11/16/1999	TAKEDA ETAL	Cited for Related Interest	463/38	
	5991594	11/23/1999	FROEBER ETAL	Cited for Related Interest	434/317	
	5995026	11/30/1999	SELLERS	Footnote 26 -- Special Interest	341/34	Yes
	5995319	11/30/1999	TANIGAWA ETAL	Cited for Related Interest	360/90	
	5999084	12/7/1999	ARMSTRONG	Cited for Related Interest	338/114	Yes
	5999808	12/7/1999	LADUE	Footnote 49 -- Special Interest	455/412.2	
	6001014	12/14/1999	OGATA ETAL	Footnote 66 -- Special Interest	463/37	
	6004210	12/21/1999	SHINOHARA	Cited for Related Interest	463/36	
	6020884	2/1/2000	MACNAUGHTON ETAL	Cited for Related Interest	345/747	Yes
	6027828	2/22/2000	HAHN	Footnote 56 -- Special Interest	429/100	
	6037954	3/14/2000	MCMAHON	Cited for Related Interest	345/169	
	6040821	3/21/2000	FRANZ ETAL	Cited for Related Interest	345/159	
	6049812	4/11/2000	BERTRAM ETAL	Footnote 29 -- Special Interest	715/516	Yes
	6049323	4/11/2000	ROCKWELL ETAL	Cited for Related Interest	345/784	
	6059660	5/9/2000	TAKADA ETAL	Cited for Related Interest	463/38	
	6060701	5/9/2000	MCKEE ETAL	Cited for Related Interest	219/681	
	6064766	5/16/2000	SKLAREW	Cited for Related Interest	382/189	
	6067005	5/23/2000	DEVOLPI	Cited for Related Interest	338/47	
	6067863	5/30/2000	FAVRE ETAL	Cited for Related Interest	73/862.68	
	6072469	6/6/2000	CHEN ETAL	Cited for Related Interest	345/157	
	6073034	6/6/2000	JACOBSEN ETAL	Cited for Related Interest	455/566	
mgw	6102802	8/15/2000	ARMSTRONG	Cited for Related Interest	463/37	Yes

Examiner
Signature*Michael J. May*Date
Considered

28 Jun 04

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Examiner Initials	US Patent Number	Publication Date	Patentee or Applicant Name	Relevant Information	US Class	Previously Submitted
	6112014	8/29/2000	KANE	Footnote 40 -- Special Interest	358/1.16	
	6118979	9/12/2000	POWELL	Footnote 46 -- Special Interest	340/7.6	Yes
	6124845	9/26/2000	TODA ETAL	Cited for Related Interest	345/157	
	6135886	10/24/2000	ARMSTRONG	Cited for Related Interest	463/37	Yes
	6153843	11/28/2000	DATE ETAL	Cited for Related Interest	200/339	
	6157935	12/5/2000	TRAN ETAL	Cited for Related Interest	715/503	Yes
	6157381	12/5/2000	BATES ETAL	Cited for Related Interest	345/786	
	6178338	1/23/2001	YAMAGISHI ETAL	Cited for Related Interest	455/566	
	6177926	1/23/2001	KUNERT	Footnote 71 -- Special Interest	345/173	
	6185158	2/6/2001	ITO ETAL	Cited for Related Interest	368/37	Yes
	6198473	3/6/2001	ARMSTRONG	Cited for Related Interest	345/163	Yes
	6198948	3/6/2001	SUDO ETAL	Footnote 43 -- Special Interest	455/566	
	6198472	3/6/2001	LECTION ETAL	Cited for Related Interest	345/161	
	6208271	3/27/2001	ARMSTRONG	Cited for Related Interest	341/34	Yes
	6222525	4/24/2001	ARMSTRONG	Cited for Related Interest	345/161	Yes
	6231444	5/15/2001	GOTO ETAL	Footnote 47 -- Special Interest	463/37	
	6239786	5/29/2001	BURRY ETAL	Cited for Related Interest	345/161	
	6256011	7/3/2001	CULVER	Footnote 63 -- Special Interest	345/157	
	6262406	7/17/2001	MCKEE ETAL	Footnote 72 -- Special Interest	219/681	
	6262406	7/17/2001	MCKEE ETAL	Cited for Related Interest	219/681	
	6275138	8/14/2001	MAEDA	Cited for Related Interest	338/47	
	6285356	9/4/2001	ARMSTRONG	Cited for Related Interest	345/167	
	6310606	10/30/2001	ARMSTRONG	Cited for Related Interest	345/161	
	6321158	11/20/2001	DELORME ETAL	Footnote 69 -- Special Interest	701/201	
	6326948	12/4/2001	KOBACHI ETAL	Footnote 65 -- Special Interest	345/157	
	6343991	2/5/2002	ARMSTRONG	Cited for Related Interest	463/37	
	6344791	2/5/2002	ARMSTRONG	Cited for Related Interest	338/114	
	6347997	2/19/2002	ARMSTRONG	Cited for Related Interest	463/37	
	6351205	2/26/2002	ARMSTRONG	Cited for Related Interest	338/114	
	6352477	3/5/2002	SOMA ETAL	Cited for Related Interest	463/36	
	6400303	6/4/2002	ARMSTRONG	Cited for Related Interest	341/176	
	6415707	6/9/2002	ARMSTRONG	Cited for Related Interest	99/280	
	6404584	6/11/2002	ARMSTRONG	Cited for Related Interest	360/88	
	6422941	7/23/2002	THORNER ETAL	Cited for Related Interest	463/30	
	6424336	7/23/2002	ARMSTRONG	Cited for Related Interest	345/159	
	6456778	9/24/2002	ARMSTRONG	Cited for Related Interest	386/46	
	6469691	10/22/2002	ARMSTRONG	Cited for Related Interest	345/159	
	6470078	10/22/2002	ARMSTRONG	Cited for Related Interest	379/93.19	
	6496449	12/17/2002	ARMSTRONG	Cited for Related Interest	345/159	
	6504527	1/7/2003	ARMSTRONG	Cited for Related Interest	345/159	
	6518953	2/11/2003	ARMSTRONG	Cited for Related Interest	345/159	
	6524187	2/25/2003	KOMATA	Cited for Related Interest	463/37	
	6529185	3/4/2003	ARMSTRONG	Cited for Related Interest	345/159	
	6532000	3/11/2003	ARMSTRONG	Cited for Related Interest	345/159	
	6538638	3/25/2003	ARMSTRONG	Cited for Related Interest	345/159	
	6559831	5/6/2003	ARMSTRONG	Cited for Related Interest	345/159	
	6563415	5/13/2003	ARMSTRONG	Cited for Related Interest	338/47	
	6424333	7/23/2002	TREMBLAY ET AL	Cited for Related Interest	345/156	
mgm	6275213	8/14/2001	TREMBLAY ET AL	Cited for Related Interest	345/156	

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Examiner Signature	<i>Michael J. Moyer</i>	Date Considered	<i>28 Jan 04</i>
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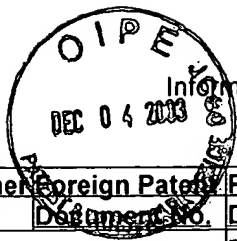
Form 1449 Modified		Application Number		09/715,532	
		Filing Date		Nov. 16, 2000	
		First Named Inventor		Brad A. Armstrong	
		Art Unit		2675	
		Examiner Name		M. Moyer	
		Applicant's File Number		F30	
Examiner Initials	Foreign Patent Document No.	Publication Date	Inventor or Applicant Name	Relevant Information	Previously Submitted
		mm-dd-yyyy			
mm	DE3543890	06-19-1987	THOMSON BRANDT	Footnote 82 -- Special Interest	Yes
	EP0470615	02-12-1992	NINTENDO CO	Footnote 81 -- Special Interest	Yes
	AU645462	01-13-1994	NINTENDO CO	Cited for Related Interest	
	AU8142991	02-13-1992	NINTENDO CO	Cited for Related Interest	
	CA2048167	02-10-1992	NINTENDO CO	Cited for Related Interest	
	CN1058728	02-19-1992	NINTENDO CO	Cited for Related Interest	
	DE69114400	12-14-1995	NINTENDO CO	Cited for Related Interest	
	ES2079529	01-16-1996	NINTENDO CO	Cited for Related Interest	
	GB2247107	02-19-1992	NINTENDO CO	Cited for Related Interest	
	HK30195	03-17-1995	NINTENDO CO	Cited for Related Interest	
	KR9705724	06-11-1997	BURR BROWN CORP	Cited for Related Interest	
	MX9100564	04-01-1992	NINTENDO CO	Cited for Related Interest	
	SG8095	06-16-1995		Cited for Related Interest	
	DE3543890	06-19-1987	THOMSON BRANDT	Footnote 82 -- Special Interest	
	EP0205726	12-30-1986	HAL LAB INC / Nakamura	Footnote 4 -- Special Interest	Yes
	SU739505	12-28-1977	BARANOV ETAL	Cited for Related Interest	Yes
	GB2205941	12-21-1988	IBM CORP	Cited for Related Interest	Yes
	GB2240614	08-07-1991	DZHOLDASBEKOV ETAL	Footnote 6 -- Special Interest	Yes
	GB2113920	08-10-1983	ALPS / Murata et al	Footnote 59 -- Special Interest	Yes
	DE19519941	03-13-1997	WERGEN	Cited for Related Interest	
	EP0438919	07-31-1991	KAYE, ARTHUR	Cited for Related Interest	
	EP0616298	09-21-1994	YANO ETAL	Cited for Related Interest	
	JP5-87760	11-26-1993	MITSUMI / Furukawa	Footnote 48 -- Special Interest	Yes
	JP7302159	11-14-1995	SEGA / Terajima	Footnote 61-- Special Interest	Yes
	DE3031484	11-04-1982	GRUNDIG EMV	Cited for Related Interest	Yes
	DE3634912	04-28-1988	LINK KG	Cited for Related Interest	Yes
	DE4019211	01-03-1991	LUTRON ELECTRONICS	Cited for Related Interest	Yes
	DE19606408	08-28-1997	CONTELEC AG	Cited for Related Interest	Yes
	EP0337458	10-18-1989	NAMCO	Cited for Related Interest	Yes
	EP0579448	01-19-1994	TEXAS INSTRUMENTS	Footnote 84 -- Special Interest	Yes
	EP1080753	03-07-2001	NAMCO	Cited for Related Interest	Yes
	GB2058462	04-08-1981	SHINESU POLYMER	Cited for Related Interest	Yes
	GB2233499	01-09-1991	MITSUBISHI	Cited for Related Interest	Yes
	GB2267392	12-01-1993	PHILLIP COLLINS	Cited for Related Interest	Yes
	GB2308448	06-25-1997	SAMSUNG DISPLAY	Cited for Related Interest	Yes
	JP60175401	09-09-1985	ASAHI CHEMICAL	Cited for Related Interest	Yes
	JP62160623	07-16-1987	KANAZAWA ETAL	Cited for Related Interest	Yes
	JP02158105	06-18-1990	YOKOHAMA RUBBER	Cited for Related Interest	Yes
	JP2158105	06-18-1990	YOKOHAMA RUBBER	Cited for Related Interest	
	JP3108701	05-08-1991	CANON INC	Cited for Related Interest	Yes
	JP04155707	05-28-1992	YOKOHAMA RUBBER	Cited for Related Interest	
	JP4155707	05-28-1992	YOKOHAMA RUBBER	Cited for Related Interest	Yes
mm	JP5151828	06-18-1993	YOKOHAMA RUBBER	Cited for Related Interest	Yes

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Examiner Signature	<i>Michiel J. Moyer</i>	Date Considered	2890 Technology Center 2600
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Examiner Initials	Foreign Patent Document No.	Publication Date mm-dd-yyyy	Inventor or Applicant Name	Relevant Information	Previously Submitted
<i>mja</i>	JP6154422	06-03-1994	NAMCO	Cited for Related Interest	Yes
	JP7281824	10-27-1995	NAMCO	Cited for Related Interest	Yes
	JP09213168	08-15-1997	KOIZUMI ETAL	Cited for Related Interest	Yes
	JP9218737	08-19-1997	NAMCO	Cited for Related Interest	Yes
	JP9223607	08-26-1997	KOIZUMI ETAL	Cited for Related Interest	
	JP11031606	02-02-1999	KOIZUMI ETAL	Cited for Related Interest	Yes
	RU2010369	03-30-1994	SMYSLOV	Cited for Related Interest	Yes
	WO9532776	12-07-1995	FUJIWARA ETAL	Cited for Related Interest	Yes
	WO9957630	11-11-1999	SCIENTIFIC ATLANTA	Cited for Related Interest	Yes
	EP0905725	03-31-1999	EATON CORP	Cited for Related Interest	
	GB2155953	10-02-1985	PERMELEC ELEC.	Cited for Related Interest	
	WO9718508	05-22-1997	SYNAPTICS INC	Footnote 91 -- Special Interest	
	DE4013227	05-29-1991	POULSOM ETAL	Footnote 97 -- Special Interest	Yes
	CA2038894	05-24-1994	PARK	Cited for Related Interest	
	WO9428387	08-08-1995	BROWN ETAL	Cited for Related Interest	
	DE69306678	01-30-1997	TEXAS INSTRUMENTS	Cited for Related Interest	
	JP6058419	03-01-1994	TEXAS INSTRUMENTS	Cited for Related Interest	
	WO9318475	12-31-1996	ARMSTRONG	Cited for Related Interest	
	EP0451676	10-16-1991	Nokia Unterhaltungselektro	Footnote 85 -- Special Interest	
	DE4011636	10-24-1991	Nokia Unterhaltungselektro	Cited for Related Interest	
	JP4230918	08-19-1992	Nokia Unterhaltungselektro	Cited for Related Interest	
	AU544234	05-23-1985	EVENTOFF	Cited for Related Interest	
	CA1143030	03-15-1983	EVENTOFF	Cited for Related Interest	
	CA1153801	09-13-1983	EVENTOFF	Cited for Related Interest	
	CA1161921	02-07-1984	EVENTOFF	Cited for Related Interest	
	CA1153577	09-13-1983	EVENTOFF	Cited for Related Interest	
	CA1153802	09-13-1983	EVENTOFF	Cited for Related Interest	
	CA1153803	09-13-1983	EVENTOFF	Cited for Related Interest	
	DE3044384	08-27-1981	EVENTOFF	Cited for Related Interest	
	FR2470435	05-29-1981	EVENTOFF	Cited for Related Interest	
	GB2064873	06-17-1981	EVENTOFF	Cited for Related Interest	
	GB2134320	08-08-1984	EVENTOFF	Cited for Related Interest	
	GB2134321	08-08-1984	EVENTOFF	Cited for Related Interest	
	GB213422	08-08-1984	EVENTOFF	Cited for Related Interest	
	IT1143185	10-22-1986	EVENTOFF	Cited for Related Interest	
	JP1976280	10-17-1995	EVENTOFF	Cited for Related Interest	
	JP5196524	08-06-1993	EVENTOFF	Cited for Related Interest	
	JP6058276	08-03-1994	MASUDA MASANORI	Cited for Related Interest	
	JP2108444	11-06-1996	ITOYAMA SEIJI	Cited for Related Interest	
	JP5197381	08-06-1993	EVENTOFF	Cited for Related Interest	
	JP6101567	12-12-1994	RIKEN CORP	Cited for Related Interest	
	JP1125871	05-18-1989	EVENTOFF	Cited for Related Interest	
	JP1993198	11-22-1995	EVENTOFF	Cited for Related Interest	
	JP5022398	03-29-1993	CANON INC	Cited for Related Interest	
	NL8006409	06-16-1981	EVENTOFF	Cited for Related Interest	
	SE452925	12-21-1987	EVENTOFF	Cited for Related Interest	
	SE8008205	05-27-1981	EVENTOFF	Cited for Related Interest	
	JP1710832	11-11-1992	EVENTOFF	Cited for Related Interest	
	JP2049029	10-26-1990	NIPPON TELEGR	Cited for Related Interest	
	JP56108279	08-27-1981	EVENTOFF	Cited for Related Interest	
<i>mja</i>	WO9304348	03-04-1993	HILTON	Cited for Related Interest	

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Examiner Initials	Foreign Patent Document No.	Publication Date	Inventor or Applicant Name	Relevant Information	Previously Submitted
		mm-dd-yyyy			
mqn	DE3687571	03-04-1993	HILTON	Cited for Related Interest	
	EP0227432	07-01-1987	HILTON	Cited for Related Interest	
	JP1875027	09-26-1994	HILTON	Cited for Related Interest	
	JP62177426	08-04-1987	HILTON	Cited for Related Interest	
	GB2133957	08-01-1984	BOUGHTON	Cited for Related Interest	
	CN1202254	12-16-1998	SYNAPTICS INC	Cited for Related Interest	
	EP0861462	09-02-1998	SYNAPTICS INC	Cited for Related Interest	
	JP11511580	10-05-1999	SYNAPTICS INC	Cited for Related Interest	
	AU557120	12-04-1986	BOUGHTON	Cited for Related Interest	
	AU2379484	08-02-1984	BOUGHTON	Cited for Related Interest	
	ZA8400356	08-29-1984	BOUGHTON	Cited for Related Interest	
	EP0835676	04-15-1998	SEGA ENTERPRISES	Cited for Related Interest	
	CA1203738	04-29-1986	CAE ELECTRONICS	Cited for Related Interest	
	DE4004760	08-22-1991	DZ HOLDASBEKOV ETAL	Cited for Related Interest	
	JP61292734	12-23-1986	HAL LAB INC.	Cited for Related Interest	
	EP0295368	12-21-1988	IBM CORP	Cited for Related Interest	
	JP4077335	12-08-1992	NKK CORP	Cited for Related Interest	
	JP63318623	12-27-1991	IBM (US)	Cited for Related Interest	
	DE19803627	08-05-1999	BALTUS RENE	Cited for Related Interest	
	JP9223607	08-26-1997	KOIZUMI ETAL	Cited for Related Interest	Yes
	WO9522828	08-24-1995	INTERLINK ELECTRONIC	Cited for Related Interest	
	EP663648	07-19-1995	IBM CORP.	Cited for Related Interest	
	JP5151828	06-18-1993	YOKOHAMA RUBBER	Cited for Related Interest	
	EP0169624	01-29-1986	ASAHI ETAL	Cited for Related Interest	
	GB2159953	12-11-1985	STC PLC	Cited for Related Interest	
	EP0050231	12-06-1983	BOSCH-SIEMENS	Cited for Related Interest	
	JP5326217	10-12-1993	MITSUMI / Furukawa	Cited for Related Interest	
mqn	JP 63-029113	08-16-1989	YAMAHA CORP.	Cited for Related Interest	

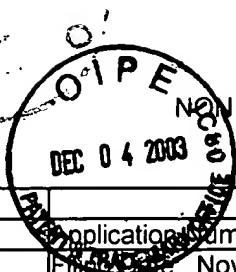
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Examiner Signature	<i>Michael J. May</i>	Date Considered	28 Jan 04
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Application Number: 09/715,532				
Filing Date: Nov. 16, 2000				
First Named Unit: Brad A. Armstrong				
Group Art Unit: 2675				
Examiner's Name: M. Moyer				
Applicant File Number: F30				
EXAMINER INITIALS	NON PATENT LITERATURE DOCUMENTS AND OTHER REFERENCES	Additional Data in Footnote	Previously Submitted in this Application	
<i>mjm</i>	Mouse Ball-Actuating Device with Force and Tactile Feedback", IBM Disclosure Bulletin, vl 32, No. 9B, Feb. 1990, pp. 230-235	Footnote 2 -- Special Interest	Yes	
<i>mjm</i>	Research Disclosures, vol. 283, Nov. 1987 (USA) "Joystick with Tactile Feedback"		Yes	
<i>mjm</i>	Development of a General Purpose Hand Controller for Advanced Teleoperation" KV Siva Harwell Laboratory, UK. July 1988	Footnote 12 -- Special Interest		
<i>mjm</i>	The "CyberMan" 3D Controller by Logitech Inc. of Fremont California US in 1993, a two page advertisement flyer is provided herewith, as are detailed drawings.	Footnote 9 -- Special Interest		
<i>mjm</i>	Kambic "Keyboard Switch with Stroke and Feedback Enhancement Using Vertically Conducting Elastomer In a Laterally Conducting Mode", IBM Technical Disclosure Bulletin, Volume 20, No. 5, October 1977, pp. 1833-1834	Footnote 22 -- Special Interest	Yes	
<i>mjm</i>	USB DEVICE CLASS DEFINITION FOR HUMAN DEVICES, OCT. 14, 1998			
<i>mjm</i>	Search results titled Questel-Orbit QWEB dated December 1999, pages 1-24 having short descriptions / abstracts thereon are submitted herewith by Applicant for study.		Yes	

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Examiner Signature	<i>M. Moyer</i>	Date Considered	2890-04
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